

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2019-224-E
DOCKET NO. 2019-225-E

In the Matter of:)	DUKE ENERGY CAROLINAS,
)	LLC'S AND DUKE ENERGY
South Carolina Energy Freedom Act)	PROGRESS, LLC'S FIRST SET OF
(House Bill 3659) Proceeding Related to)	REQUESTS FOR PRODUCTION OF
S.C. Code Ann. Section 58-37-40 and)	DOCUMENTS AND
Integrated Resource Plans for Duke)	INTERROGATORIES TO SOUTH
Energy Carolinas, LLC and Duke Energy)	CAROLINA SOLAR BUSINESS
Progress, LLC)	ALLIANCE, INCORPORATED
)	

Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”) (together, “Duke Energy” or the “Companies”), by and through their legal counsel, pursuant to Rule 103-833(C) of the Rules of Practice and Procedure of the South Carolina Public Service Commission, hereby serves South Carolina Solar Business Alliance, Incorporated (“SBA”) with the following First Set of Requests for Production and Interrogatories to be answered under oath on or before twenty (20) days from the date of service.

Further, please take notice that these Requests for Production and Interrogatories are continuing in nature until the date of the hearing, and that any information or responsive materials identified after your responses have been served upon the undersigned counsel should be provided via supplemental discovery responses as soon as possible after such identification.

INSTRUCTIONS

1. Please produce the requested documents as they are kept in the usual course of business or to organize and label them to correspond with the categories in the Request. Documents attached to each other should not be separated.

2. In producing Documents, furnish all documents known or available to you, regardless of whether such documents are possessed directly by you or your agents, employees, representatives, investigators, or by your attorneys. All requests for Documents specifically request documents of South Carolina Solar Business Alliance, Incorporated as well as the Solar Energy Industries Association, and Energy and Environmental Economics, Inc., who you have retained to provide testimony in this proceeding.

3. If any document otherwise responsive to any Request was, but is no longer, in your possession, subject to your control or in existence, identify each document by listing its author(s) and addressee(s), date, subject matter, whether the document(s) or copies are still in existence (and if so, their locations and the custodians), as well as whether the document is missing or lost, has been destroyed, has been transferred voluntarily to others, or has been otherwise disposed of. In each instance, explain the circumstances surrounding such disposition and identify the person(s) directing or authorizing its destruction or transfer, and the date(s) of such direction or authorization.

4. If a privilege or objection as to any Request is claimed, identify with specificity the matter as to which the privilege or objection is claimed, the nature of the privilege or objection, and the legal and factual basis for each such claim, and provide a complete description of the information or document being withheld.

5. Unless otherwise stated, the relevant time period for these Requests is from January 1, 2018, until the present.

6. Each Request shall be reproduced at the beginning of the response thereto.

7. Please provide copies of the information responsive to each Request in native electronic working format with all data and formulas intact.

8. Please provide responses to the following data requests electronically. To the extent this is impracticable, the responses, including any responsive Documents, should be provided at the offices of Robinson, Gray, Stepp & Laffitte, LLC, 1310 Gadsden Street, Columbia, South Carolina 29201, or some mutually convenient location otherwise agreed to by the parties.

DEFINITIONS

1. **“Commission”** means the Public Service Commission of South Carolina.

2. **“Communication”** means the transmittal of information in the form of facts, ideas, Documents, inquiries, or otherwise, including every discussion, conversation, conference, or telephone call.

3. **“You”** and **“your”** means the South Carolina Solar Business Alliance, Incorporated (“SBA”), South Carolina Solar Business Alliance, Incorporated’s witnesses in this proceeding, including but not limited to, retained witnesses from Solar Energy Industries Association, and Energy and Environmental Economics, Inc., and all of their members, agents, representatives and attorneys.

4. **“SEIA”** means the Solar Energy Industries Association and all of its members, agents, representatives and attorneys

5. **“Dockets”** means Commission Docket Nos. 2019-224-E & 2019-225-E.

6. The term **“document”** is to be construed as broadly as permissible under Rule 34 of the South Carolina Rules of Civil Procedure and includes, but is not limited to, any printed, typewritten, handwritten or otherwise recorded information of whatever character, including, but not limited to, letters, memoranda, notes, diaries, reports, records, calendars, charts, audio and/or video tapes or discs, and photographs; computer programs or disks; electronic media records, however recorded and maintained, including, but not limited to, electronic mail, voicemail messages, digital photographs and electronically scanned records of any type; recorded observations, statements, conversations or formal affidavits. Any carbon or photocopy of any such materials upon which notations have been made and all drafts are also included.

7. **“Person”** means any natural person or any business, legal, or governmental entity or association.

8. The terms **“related to”** and **“relating to”** or any variation thereof shall be construed to include refer to, summarize, reflect, constitute, contain, embody, mention, show, comprise, evidence, discuss, describe, comment on, concerning, regarding, eluding to, pertaining to, probative of, in connection with, dealing with, in respect of, about, involved, identifying or proving.

9. **“Identify”** when referring to a Person, means to give, to the extent known, the Person’s full name, present or last known address, and when referring to a natural Person, additionally, the present or last known place of employment.

10. **“Identify”** when referring to Documents, means to give, to the extent known, the (i) type of Document; (ii) general subject matter; (iii) date of the Document; and (iv) authors, addressees and recipients.

11. **“Identify”** when referring to an oral Communication, means to give, to the extent known, the identity of the speaker and of each Person who was present when the Communication was spoken, and the substance, date, and place of such Communication.

12. **“Integrated Resource Plans” or “IRPs”** refers to DEC’s and DEP’s respective integrated resource plans filed with the Public Service Commission of South Carolina in the Dockets on September 1, 2020.

INTERROGATORIES

Mr. Kevin Lucas, SEIA

1-1. Please identify any and all members of SEIA's Board of Directors during the period 2018 to present who are employed by solar development companies that have developed or are currently in the business of developing utility-scale solar generation projects in DEC's and/or DEP's service territories in either South Carolina or North Carolina. For each such individual, please state his/her name, identify his/her employer, his/her current title, number of years served in a leadership or board role at SEIA.

ANSWER:

1-2. Please explain the general funding structure of SEIA, including by stating whether SEIA (1) collects membership dues from its members; (2) receives funding from private or institutional donors; and/or (3) receives funding from any other source, including public and private grants. To the extent SEIA is funded, in whole or in part, through donors, please identify its top ten (10) donors in 2020 and the dollar amount of funding provided by each individual or entity listed.

ANSWER:

1-3. In reference to Interrogatory Question 1-2, inquiring regarding SEIA's funding structure, please identify the total funding provided in calendar year 2020 by the following organizations or solar development companies operating in the Companies' service territories in South Carolina and North Carolina. For each entity, please describe whether the funding, in whole or in part, was general membership dues or was designated

for a specific purpose, including but not limited to relating to SEIA's advocacy for solar policies in South Carolina or North Carolina:

- a. Southern Current
- b. Pinegate Renewables
- c. Cypress Creek Renewables
- d. Carolina Solar Energy
- e. Birdseye Solar
- f. Apex Clean Energy
- g. FirstSolar

ANSWER:

1-4. Please identify and produce all correspondence and other Documents between SEIA and the following individuals relating to SEIA's participation generally and/or Mr. Lucas' testimony in the Dockets:

- a. Hamilton Davis
- b. Steve Levitas
- c. Ben Catt
- d. Tyler Norris
- e. Maggie Clark

ANSWER:

1-5. With respect to SBA Witness Lucas' statement at page 1 of his testimony that "SEIA is leading the transformation to a clean energy economy, creating the

framework for solar to achieve 20% of U.S. electricity generation by 2030,” please explain whether SEIA’s organizational objective for solar to achieve 20% of U.S. electricity generation by 2030 introduces, reflects or otherwise causes any bias in your testimony (yes/no). Please explain your response in detail.

ANSWER:

1-6. With respect to SBA Witness Lucas’ statement at page 103 of his testimony that “Duke should also explore the potential benefits of broader regionalization through structures such as energy imbalance markets (“EIM”) or regional transmission organizations (“RTO”),” please explain whether Mr. Lucas and/or SEIA have developed any analysis or attempted to quantify the potential benefits of broader regionalization through Duke’s integration into an EIM or RTO. Please explain your response in detail and produce any Documents relating to any analysis undertaken by or on behalf of Mr. Lucas or SEIA.

ANSWER:

1-7. With respect to SBA Witness Lucas’ statement at page 4 of his testimony that “Duke also fails to consider adding energy-only resources during years where there is no capacity need . . .,” please explain in detail the basis for this statement.

ANSWER:

1-8. As part of SBA Witness Lucas' review of the Companies' IRPs and development of his testimony, please describe in detail any qualitative or quantitative analysis that SBA Witness Lucas undertook to evaluate the "potential for energy-only resources to provide savings compared to the running costs of existing resources" as discussed on page 16 of his testimony.

ANSWER:

1-9. With respect to SBA Witness Lucas' statement on page 16 of his testimony that "[t]he Commission also cited DESC for not considering the addition of new resources or PPAs when there was not a capacity need, failing to recognize the potential for energy-only resources to provide savings compared to the running costs of existing resources," please identify:

- a. State Public Service Commissions or Regulatory Authorities of which Mr. Lucas is aware that have required a utility to develop an analysis or planning scenario for resource planning purposes to "recognize the potential for energy-only resources to provide savings compared to the running costs of existing resources";
- b. State Public Service Commissions or Regulatory Authorities of which Mr. Lucas is aware that have addressed "the potential for energy-only resources to provide savings compared to the running costs of existing resources" in the context of utility resource planning;
- c. Utilities of which Mr. Lucas is aware that have developed a planning scenario for resource planning purposes that "recognize[s] the potential

for energy-only resources to provide savings compared to the running costs of existing resources”;

- d. Please identify the docket number for any State Public Service Commission or Regulatory Authority proceeding and identify and provide any Documents that Mr. Lucas relied upon in responding to subparts a.-c. of this request.

ANSWER:

1-10. Please explain in detail SBA Witness Lucas’ analysis and quantification of incremental costs of DEC’s and DEP’s resource planning portfolios discussed in A23 of his testimony, specifically on page 18, Lines 3-14. Please also identify and provide all supporting analyses, data, and workpapers that Mr. Lucas used to develop this analysis.

ANSWER:

1-11. In reference to SBA Witness Lucas’ discussion of Duke’s solar fixed O&M costs on page 38 of his testimony, he states that “Duke’s 2020 figure [of fixed O&M costs] is roughly 12% lower than NREL ATB’s, a notable divergence from its capital cost adjustment.” Witness Lucas then recommends that Duke “model lower costs to mirror the discount from the NREL ATB that is used in the Company’s capital cost forecast.”

- a. Please explain what types of factors may lead to Duke’s capital costs being 19% lower than NREL’s capital costs.
- b. Please explain your understanding of what types of costs are typically included when calculating fixed O&M costs of solar?

- c. What components of solar capital costs and solar fixed O&M costs are similar such that the same cost difference between NREL's capital costs and Duke's capital costs should be applied to fixed O&M costs?
- d. If Witness Lucas does not know what components are similar between capital costs and solar fixed O&M costs, please explain why Duke should apply the same reduction in capital costs versus NREL's capital costs to NREL's fixed O&M costs?

ANSWER:

1-12. In reference to page 45 of SBA Witness Lucas' testimony, please explain why Duke should be required to use the NREL ATB Advanced scenario rather than the NREL ATB moderate scenario in quantifying storage costs for future IRP analysis?

ANSWER:

1-13. In reference to A67 on page 46 of SBA Witness Lucas' testimony, please explain in detail how Mr. Lucas calculated that 2,500 MW of 2-hr duration storage will receive at least 70% capacity value, and identify and provide all supporting analyses, data, and workpapers for this conclusion.

ANSWER:

1-14. With respect to SBA Witness Lucas' statement on page 39 of his testimony which states that "penalty provisions in PPA documents ensure that operators will hold up their end of the bargain lest face financial penalties....," please identify:

- a. the purchasing utility/off-taker and produce the PPA documents to which Mr. Lucas refers in making this statement and identify the penalty provisions therein.
- b. provide all Documents that Mr. Lucas relies upon to develop this response.

ANSWER:

1-15 With respect to SBA Witness Lucas' statement on page 39 of his testimony which states: "As capital costs fall, fixed O&M costs become a higher proportion of the lifecycle costs of a solar plant. Solar is a competitive industry seeking to apply new technologies and data analytics to proactively and predictively anticipate outages to minimize system downtime. Companies that can bid lower cost O&M costs will be able to win competitive procurements, and penalty provisions in PPA documents ensure that operators will hold up their end of the bargain lest face financial penalties."

- a. Please provide specific examples of "new technologies and data analytics" that are being used to minimize system downtime;
- b. Please provide any analysis, Documents or other evidence that solar plants have, in fact, minimized system downtime.

ANSWER:

1-16 With respect to SBA Witness Lucas' discussion of battery capital costs and useful life at Q-A59 to Q-A63 (pages 40-44), the 2019 Lazard Study cited by Mr. Lucas shows battery storage asset life of 20 years, while the NREL ATB study cited by Mr. Lucas

shows battery storage asset life of 15 years. NREL also assumes a 30-year capital recovery period for solar. The Companies' IRPs similarly assume standalone battery storage life of 15 years, while assuming that solar assets have a 30-year life.

- a. Please explain how SBA Witness recommends the Company align the battery storage life of 15-years with the solar asset life of 30-years for a DC-coupled solar plus storage asset as compared to the modeling approach Duke used in the 2020 IRP?
- b. What components of the battery storage system does SBA believe need to be replaced at the end of the 15-year life of a battery storage system to ensure the battery asset meets the 30-year life of the solar asset?

ANSWER:

1-17. With respect to SBA Witness Lucas' statement on page 45 of his testimony that "the Commission already ruled on this issue in the DESC IRP case, finding that DESC similarly overinflated its storage costs and directed it to remodel its IRP using NREL ATB's Advanced scenario," please identify:

- a. all other State Public Service Commission or Regulatory Authorities of which Mr. Lucas is aware that have required a utility to utilize NREL ATB's Advanced scenario as the basis for their energy storage costs for resource planning purposes;
- b. all other State Public Service Commission or Regulatory Authorities of which Mr. Lucas is aware that have characterized use of lower storage

cost assumptions for resource planning as “overinflated” relative to the costs presented in NREL ATB’s Advanced scenario;

- c. any utilities of which Mr. Lucas is aware that have utilized NREL ATB’s Advanced scenario or NREL ATB’s Moderate scenario as the basis for their energy storage costs for resource planning purposes versus developing their own independent battery storage cost assumptions.

ANSWER:

1-18. With respect to SBA Witness Lucas’ statement on page 92 of his testimony that “other regions have the physical ability to provide capacity to DEP and DEC during their winter peaks, but they have capacity to spare...,” please:

- a. explain Mr. Lucas’s understanding and use of the phrase “capacity to spare” from system operational perspective;
- b. identify any regulatory requirements or industry-accepted operational standards that would affect whether a utility has “capacity to spare” during winter peak periods based upon real-time system operations.

ANSWER:

1-19. With respect to SBA Witness Lucas' statement on page 92 of his testimony that "DEC's summer peak demand actually shrunk at a compound annual growth rate ("CAGR") of -0.37% between 2010 and 2020 (solid red), while the weather-normalized values rose at a mild 0.06% CAGR (dashed red) . . ." please explain in narrative form how this calculation was made, and identify and provide all analyses, data, and workpapers for this calculation, including any underlying spreadsheet with working formulas.

ANSWER:

1-20. With respect to SBA Witness Lucas' recommendation on page 108 of his testimony that "the Commission [should] direct Duke to study the impact of joint planning of and long term capacity sharing across its two systems and prepare a feasibility study on merging these functions across the two utilities....," please:

- a. explain in detail the issues Witness Lucas recommends the Companies analyze and address in undertaking the proposed feasibility study;
- b. explain in detail the utility functions that Witness Lucas recommends be merged;
- c. explain in detail the cost savings that Witness Lucas suggests appear to be to be "available" or achievable that should be evaluated in completing this feasibility analysis; and
- d. identify all other State Public Service Commission or Regulatory Authority of which Mr. Lucas is aware that have required a utility to undertake a comparable feasibility studies relating to its FERC-jurisdictional operations.

ANSWER:

1-21. With respect to SBA Witness Lucas' testimony on pages 109-110 addressing enactment of H. 4940 and the ongoing work of the legislative committee and advisory board that has until fall 2021 to study changes to the electricity sector in South Carolina," please explain what, if any, recommendations SBA or Witness Lucas believe the Public Service Commission should undertake in this proceeding prior to June 2021 relating to energy market reforms in South Carolina.

ANSWER:

Mr. Arne Olson, Energy and Environmental Economics, Inc.

1-22. Please identify any production cost modeling work or production cost modeling studies that SBA Witness Olson has completed on behalf of (i) an electric utility, (ii) State Public Service Commission or Regulatory Authority responsible for regulating utility resource planning, or (iii) an intervenor in a proceeding before a State Public Service Commission or Regulatory Authority, relating to integrated resource planning within the last five (5) years as well as identification of the particular state docket number.

ANSWER:

1-23. Referring to SBA Witness Olson's Figure 2 on page 18, is it correct to say that Witness Olson calculated that 1,600 MW of 4-hour storage had an ELCC of 721 MW representing an ELCC of less than 50%?

ANSWER:

1-24. Referring to SBA Witness Olson's testimony discussing his use of the E3 RECAP model to calculate ELCC values for DEC and DEP, please explain, identify and/or provide the following:

- a. Provide all inputs and outputs of the RECAP solar ELCC simulations for DEC and DEP.
- b. Provide all inputs and outputs of the RECAP solar and storage ELCC simulations for DEC and DEP that calculate the diversity benefit of the two technologies.

- c. Provide the LOLE by month for each solar penetration studied in the RECAP Model for DEC and DEP as well as a 12x24 of all LOLE events.
- d. Provide the monthly LOLE results for the analysis provided in Figure 9 in Exhibit AO-2 as well as a 12x24 of all LOLE events.
- e. Provide the RECAP solar ELCC calculations by winter and summer season for each solar penetration for both DEP and DEC.
- f. Please provide all EFOR data by season and month used in the RECAP model.
- g. Provide details of imports modeled in RECAP, and explain exactly how this was captured.
- h. Provide details of DR modeling including capacity, and hourly dispatches used.
- i. Identify how many and which weather years were used in the RECAP modeling and explain the reasoning for including the identified weather years.

ANSWER:

1-25. Referring to SBA Witness Olson's testimony discussing his use of the E3 RECAP model to calculate ELCC values for DEC and DEP, please explain in detail:

- a. Has E3 conducted any benchmarking of the RECAP model to other loss of load probability models? If so, please provide the conclusions of the benchmarking.
- b. How long has the RECAP model been in use?

- c. Who are current users of the RECAP model (other than E3)?
- d. Have RECAP modeling results been accepted by any State Public Service Commissions or Regulatory Authorities? If so, please identify the State Public Service Commissions or Regulatory Authorities and describe the specific applications for which RECAP was used including providing the docket number of the proceeding, if applicable.

ANSWER:

1-26. Referring to SBA Witness Olson's Exhibit AO-2, p.4, Item 5 states: "Duke's assumption of fixed-tilt solar instead of tracking diminishes the capacity value of solar. Currently, nearly all the utility scale solar being built in the US is tracking solar which has improved ELCCs due to its ability to track the sun," please explain whether you analyzed the validity of this statement for the southeast, specifically North Carolina and South Carolina and provide any analysis, workpapers or other Documents that you relied upon that shows the percentage of fixed versus tracking utility scale solar for the southeast, specifically North Carolina and South Carolina.

ANSWER:

1-27. With respect to SBA Witness Olson's testimony on page 5 that "[i]ncorporat[ing] climate policy and the impact of climate change" are "IRP best practices," please identify:

- a. All other State Public Service Commissions or Regulatory Authorities of which Mr. Olson is aware that have required a utility to develop an analysis

or planning scenario for resource planning purposes to incorporate climate policy and the impact of climate change as an IRP best practice.

- b. All other State Public Service Commission or Regulatory Authorities of which Mr. Olson is aware that have determined that incorporating climate policy and the impact of climate change is an IRP best practice in the context of utility resource planning.
- c. All utilities of which Mr. Olson is aware that have developed an integrated resource plan that incorporates climate policy and the impact of climate change in selecting new capacity resources over and above compliance with existing legal and regulatory requirements.
- d. Please identify the docket number for any State Public Service Commission or Regulatory Authority proceeding and identify and provide any Documents that Mr. Olson relied upon in responding to subparts a.-c. of this request.

ANSWER:

1-28. As provided in the instructions to these Interrogatories, if a privilege or objection as to any Request is claimed, identify with specificity the matter as to which the privilege or objection is claimed, the nature of the privilege or objection, the legal and factual basis for each such claim, and a complete description of the information or document being withheld.

ANSWER:

REQUESTS FOR PRODUCTION

1-1. Please produce copies of all data requests, requests for production, interrogatories, or other communications informally requesting discovery that have been received by SBA in connection with this Docket. Please produce these as soon as practicable after they are received. Please consider this an ongoing request.

RESPONSE:

1-2. Please produce copies of SBA's responses to all data requests, requests for production, interrogatories, or any other information provided by SBA in connection with this Docket. This includes all documents, electronic files or other attachments that were that were provided, or made available for on-site inspection. Please produce these at the same time they are provided to the requesting party, or if that is impossible, as soon as practicable thereafter.

RESPONSE:

1-3. Please produce copies of all data requests, requests for production, interrogatories, or any other communications informally requesting information that SBA has served on other parties in connection with this Docket. Please produce these at the same time they are served on the other party. Please consider this an ongoing request.

RESPONSE:

1-4. Please produce copies of the responses to all data requests, requests for production, interrogatories, or any other request for information that SBA has served on

other parties in connection with this docket. Please produce these as soon as practicable after they are received. Please consider this an ongoing request.

RESPONSE:

1-5. Please produce any and all documents identified, referred to, or relied upon in preparing your response to Duke Energy's First Set of Interrogatories to SBA.

RESPONSE:

1-6. Please identify and produce all correspondence and other Documents between SEIA and the following individuals relating to SEIA's participation generally and/or Mr. Lucas' testimony in the Dockets:

- a. Hamilton Davis
- b. Steve Levitas
- c. Ben Catt
- d. Tyler Norris
- e. Maggie Clark

RESPONSE:

1-7. Please provide all supporting analyses, data, and workpapers for "Table 2 – Cost Range and Minimax Analysis – Carbon Cost Included" presented on page 29 of SBA Witness Lucas' testimony.

RESPONSE:

1-8. Please provide all supporting analyses, data, and workpapers for “Table 3 – LCOE Under Duke ITC Assumptions and Current Law” presented on page 35 of SBA Witness Lucas’ testimony.

RESPONSE:

1-9. Please provide all supporting analyses, data, and workpapers for “Table 5 – Pumped Hydro Study Summary” presented on page 61 of SBA Witness Lucas’ testimony.

RESPONSE:

1-10. Please provide all supporting analyses, data, and workpapers for “Table 6 – DEP and DEC Import Capacity” presented on page 105 of SBA Witness Lucas’ testimony.

RESPONSE:

1-11. Please provide any correspondence or Documents developed or authored by SBA, contributed to by SBA, or approved by SBA’s Board of Directors relating to or otherwise advocating for “broader regionalization” of power system planning and operations in South Carolina as described in SBA Witness Lucas’ testimony at 103-110.

RESPONSE:

1-12. Please provide any correspondence or Documents developed or authored by SEIA, contributed to by SEIA, or approved by SEIA's Board of Directors relating to or otherwise advocating for "broader regionalization" of power system planning and operations in South Carolina as described in SBA Witness Lucas' testimony at 103-110.

RESPONSE:

1-13. Please provide all supporting analyses, data, and workpapers relating to the development of "Figure 5 – Fixed O&M" on page 38 of SBA Witness Lucas' testimony, including but not limited to specific references to the NREL ATB report discussed by Witness Lucas.

RESPONSE:

1-14. Please provide all supporting analyses, data, and workpapers for "Table 4 - Energy Storage Cost Comparison" presented on page 40 of SBA Witness Lucas' testimony. Please ensure SBA's response includes the source documentation for the Santee Cooper RFI capital costs shown in row 7 of the table.

RESPONSE:

1-15. Please provide all supporting analyses, data, and workpapers relating to the development of "Figure 7 – NC/SC PV Installs by Type" on page 48 of SBA Witness Lucas' testimony.

RESPONSE:

1-16. Please provide all supporting analyses, data, and workpapers for “Figure 11 - Small PV System Type by Year” presented on page 55 of SBA Witness Lucas’ testimony.

RESPONSE:

1-17. Please provide all supporting analyses, data, and workpapers for “Figure 12 - Large PV System Type by Year” presented on page 56 of SBA Witness Lucas’ testimony.

RESPONSE:

1-18. Please provide all supporting analyses, data, and workpapers for “Figure 30 – Duke DEC Ten Year Summer Forecast” presented on page 92 of SBA Witness Lucas’ testimony.

RESPONSE:

1-19. Please provide all supporting analyses, data, and workpapers for “Figure 34 Duke New Builds and NG Price - Base w Carbon” presented on page 100 of SBA Witness Lucas’ testimony.

RESPONSE:

1-20. Please provide all supporting analyses, data, and workpapers for “Figure 35 Duke New Builds and NG Price – Earliest Retirement” presented on page 100 of SBA Witness Lucas’ testimony.

RESPONSE:

1-21. Please provide all supporting analyses, data, and workpapers relating to the development of “Figure 9 – Quantification of ELCC and Diversity Benefits of Solar and a 4-hour battery” on page 32 of Exhibit AO-2.

RESPONSE:

1-22. Please provide all supporting analyses, data, and workpapers relating to the development of “Figure 2: Quantification of ELCC and Diversity Benefits from Solar” on page 18 of SBA Witness Olson’s testimony.

RESPONSE:

1-22. Referring to SBA Witness Olson’s testimony discussing his use of the E3 RECAP model to calculate ELCC values for DEC and DEP, please provide the RECAP model and associated User Manual.

RESPONSE:

1-23. Please provide all supporting analyses, data, and workpapers for Figure 8, page 31 of Exhibit AO-2.

RESPONSE:

1-24. As provided in the instructions to these Requests, if a privilege or objection as to any Request is claimed, identify with specificity the matter as to which the privilege or objection is claimed, the nature of the privilege or objection, the legal and factual basis

for each such claim, and a complete description of the information or document being withheld.

RESPONSE:

Dated this 12th day of February 2021.

/s/Heather S. Smith
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